

DECLARATION, POWER OF ATTORNEY AND PETITION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled "**PERPENDICULAR MAGNETIC HEAD HAVING THERMALLY ASSISTED RECORDING ELEMENT, AND METHOD OF FABRICATION THEREOF**" the specification of which

(check one) is attached hereto.
 was filed on _____ as Application Serial No. _____
 and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application of which priority is claimed.

Prior Foreign Application(s)

	Priority Claimed	
(Number)(Country)(Day, month, year filed)	Yes	No
(Number)(Country)(Day, month, year filed)	Yes	No
(Number)(Country)(Day, month, year filed)	Yes	No

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	Filing Date	(Status: Patented, pending, abandoned)
(Application Serial No.)	Filing Date	(Status: Patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint R.O. GUILLOT, REG. 28,852; L.B. GUERNSEY REG. 40,008; M.J. HUGHES, REG. 29,077; R.E. ROBERTS, REG. 38,597; G.B. GOATES, REG. 35,159; D. R. MILLETT, REG. 31,784; T.R. BERTHOLD, REG. 28,689; R.B. FEECE, REG. 46,327; R.B. MARTIN, REG. 26,945; L.L. NUNNELLEY, REG. 42,942; IPLO[®], INTELLECTUAL PROPERTY LAW OFFICES, 1901 S. Bascom Ave., Campbell, California 95008, (408) 558-9950, as my attorneys with full power of substitution and revocation, to prosecute said application and to transact in connection therewith all business in the Patent and Trademark Office and before competent International Authorities.

Address all telephone calls to Robert O. Guillot at (408) 558-9950, and address all correspondence to:

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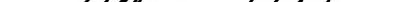
Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney, and this petition.

Full Name of Sole or First Inventor: Jeffrey S. Lille

Home Address: 1046 Chula Vista Terrace, Sunnyvale, CA 94086

Post Office Address: **Same as above**

Citizenship: United States

Inventor's Signature:  Date: July 18, 2003

Full Name of Second Inventor: Hugo Alberto Emilio Santini

Home Address: 339 Bodega Way, San Jose, CA 95119

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Inventor's Signature: _____ **Date:** _____

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Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney, and this petition.

Full Name of Sole or First Inventor: Jeffrey S. Lille
Home Address: 1046 Chula Vista Terrace, Sunnyvale, CA 94086
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Inventor's Signature: _____ Date: _____

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Inventor's Signature: Hugo Alberto Emilio Santini Date: 07/16/2003

ARC920000094 DOCUMENT=

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PAGE =

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PRIORDAF = 20000629

TITLE = THERMALLY-ASSISTED MAGNETIC RECORDING SYSTEM WITH HEAD HAVING

USPATDAF =

DOSSIER ARC920000094

SECURITY IBM CONFIDENTIAL - PREPARED BY IBM ATTORNEY

PRIORITY 20000629

PPMCODE 302

TITLE THERMALLY-ASSISTED MAGNETIC RECORDING SYSTEM WITH HEAD HAVING
RESISTIVE HEATER IN WRITE GAP

INVENTOR Prakash Kasiraj, H Wickramasinghe, Neil Robertson

DOCKETS DOCKET NUMBER STATUS RATE ISSUE DATE PAT. NUMBER

ARC920000094JP1 Pending 2

ARC920000094KR1 Pending 2

ARC920000094SG1 Pending 2

ARC920000094US1 Pending 2

ATTYRATE 2 20000522 Thomas Berthold

PPMRATE 2 20001227 Janet Parks

DIVISION RES

CTRYPPM Country selections: United States of America

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1:SRC 2:SEL 3:BRW 4:DSP ALL 5=XPLN 6=LIST 7=DOC-1 8=DOC+1 10=P-1 11=P* 12=CPY (DOSS)

Filed 6/29/00
Application # 09/608,848

Susana Delgado 28-Nov-2000

PPM selects US, Japan, Korea and Singapore at filing.

National selections: Japan, Republic of Korea, Singapore, United States of America

ARC9-2000-0094-JP1 has been created for processing location JP

ARC9-2000-0094-KR1 has been created for processing location JP

ARC9-2000-0094-SG1 has been created for processing location JP

ARC9-2000-0094-US1 already exists, a new one has not been created

Douglas R. Millett 27-Dec-2000

DESCRIPT Abstract of the Disclosure

A thermally-assisted magnetic recording disk drive records data by heating a small region of the magnetic layer on the disk to near or above its Curie temperature while a write field is applied by a **thin film inductive write head**. The **thin film inductive write head** includes an electrically resistive **heater** located in the write gap between the pole tips of the **write head**. The resistive **heater** is sandwiched between first and second spacer layers that are located between the pole tips of the **write head**. In a current-perpendicular-to-the plane (CPP) embodiment, the spacer layers are electrically conductive and the pole tips serve as the

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electrical leads to provide electrical current in a direction generally perpendicular to the layer of resistive heater material. In a current-in-the plane (CIP) embodiment, the spacer layers are formed of insulating material and electrical leads are formed as portions of a film between the spacer layers and in contact with each side of the resistive heater. The width of the resistive heater is less than the width of the pole tips. Thus since only the region of the magnetic layer on the disk that is heated by the resistive heater can be written by the pole tips of the write head, the data track width on the disk is defined by the width of the resistive heater, not by the geometry of write head pole tips.

Thomas Berthold 28-Nov-2000

CLAIMS

CLAIMS AT FILING: Claims for docket ARC920000094US1

What is claimed is:

1. A thermally assisted magnetic recording thin film inductive write head having a thin film inductive coil and pair of write poles separated by a write gap, the head comprising an electrically resistive heater in the gap.

All comments above have been modified by Thomas Berthold
28-Nov-2000

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ARC920000094 DOCUMENT= 1 OF 1 PAGE = 4 OF 4
Thomas Berthold/Almaden/IBM
PRIORART US5986978 US5583727
Thomas Berthold 28-Nov-2000
DIVULGAT Unknown.
Thomas Berthold 28-Nov-2000

R0601 * END OF DOCUMENTS IN LIST - ENTER RETURN OR ANOTHER COMMAND.

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